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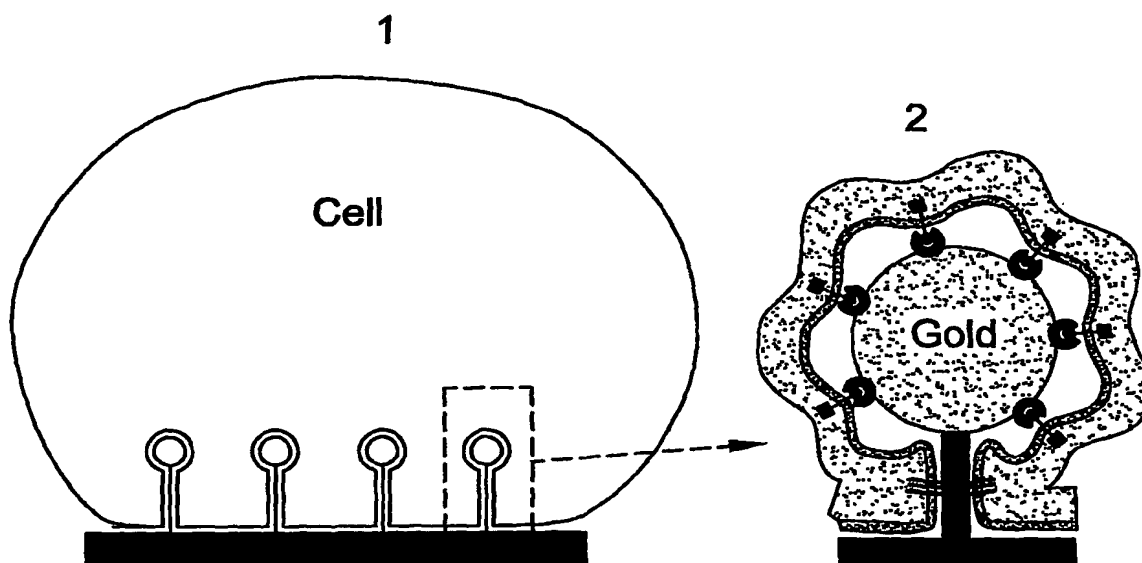
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- (74) Agent: **REINHOLD COHN AND PARTNERS**; P.O.B. 4060, 61040 Tel-Aviv (IL).
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- (71) Applicant (for all designated States except US): **YISSUM RESEARCH DEVELOPMENT COMPANY OF THE HEBREW UNIVERSITY OF JERUSALEM** [IL/IL]; Hi Tech Park, Edmond Safra Campus, Givat Ram, 91390 Jerusalem (IL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **SPIRA, Micha** [IL/IL]; 7 Malki Street, Yemin Moshe, 94102 Jerusalem (IL). **YITZCHAIK, Shlomo** [IL/IL]; 6/1 Davidson Street, 93708 Jerusalem (IL). **SHAPPIR, Joseph** [IL/IL]; 30 Hermon Street, P.O.BOX 85310, 90805 Mevasseret Zion (IL).
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(54) Title: ELECTRONIC DEVICE FOR COMMUNICATION WITH LIVING CELLS



(57) Abstract: The present invention provides a surface-substrate for adherence of cells thereto. The surface-substrate comprises at least one microneedle structure protruding from the surface, at least a region of the microneedle having cellular-internalization promoting properties. The invention also provides an electronic device comprising a transistor structure, in which a gate electrode is formed with the at least one microneedle protruding from the surface thereof.



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